13.Replication processes in Specific Artificial Intelligence for Artificial Research by Deduction

Dr. Ruben Garcia Pedraza

Probabilidad Imposible: Replication processes in Specific Artificial Intelligence for Artificial Research by Deduction

imposiblenever@gmail.com

13.Replication processes in Specific Artificial Intelligence for Artificial Research by Deduction

Replication processes in Specific Artificial Intelligence for Artificial Research by Deduction are all those which imitate some physical human skill by robotic devices, or some psychological human Skill by artificial psychology, allowing for carrying on research in any synthetic science, synthetic academic field, or activity.

These processes are going to involve the replication of physical human skills and the replication of human psychology skills, through thousands and thousands of robotic devices around the world or beyond, the whole universe, collecting information for that specific synthetic science or specific synthetic academic field for which the Specific Artificial Intelligence has been created. Information in direct punctuations or frequencies inserted, directly by the robotic devices, as a permanent flow of data in the specific matrix, as a database of this Specific Artificial Intelligence.

The flow of data in the matrix, which the Artificial Intelligence will use to identify any possible stochastic relations, mathematical patterns, cryptographic relations, and finally, the use of the Second Method of Impossible Probability to find relations of equity or bias, either positive or negative.

Identification of relations automatable, tracking automatically and permanently all mathematical possible relations (stochastic, pattern, cryptographic, equal opportunities or bias, positive or negative) in every possible combination of factors, a combination of factors easily made by the combinatory theory.

Once any of these possible relations are found in any possible combination of factors, taken as empirical hypothesis this specific relation in this specific combination, and taking samples of the flow of data

directly from the matrix, the empirical hypothesis is critically contrasted, and if it is rational, on the empirical hypothesis now as a rational hypothesis the formation of a single virtual model from this rational hypothesis, that later must be integrated into the comprehensive virtual model where are integrated all the rational hypothesis found for this Artificial Intelligence.

The individual analysis of every single step of this process should be the following, generally speaking, but as well as I said in the post "*Replication processes in the Artificial Research by Application*", in case for any reason in any particular synthetic science or synthetic academic field instead of statistical and probabilistic methods, would be advisable the use of different methods, any other method of mathematical analysis research is welcome.

What I try to do in Impossible Probability with this range of posts of Artificial Research, by Application or Deduction, in any Artificial Intelligence, Specific or Global, is to open the door to a new field of experimentation in Artificial Intelligence, whose last goal must be the creation of the very first prototypes of Global Artificial Intelligence, whose last purpose is not only the synthetic knowledge, but even the analytic knowledge, what at the end of this process must be able to develop its own mathematical and logical models, the creation of non human pure operations beyond human understanding.

Additionally, the Global Artificial Intelligence must be able to integrate all kinds of Specific Artificial Intelligence, not only Specific Artificial Intelligences for Artificial Research. It would be advisable that the Global Artificial Intelligence should integrate absolutely all kinds of Specific Artificial Intelligences for any purpose, from industry and economy to security and surveillance, as well as any other such Specific Artificial Intelligences for educational systems, health systems, justice systems, among others.

With the inclusion of all these Specific Artificial Intelligences, through virtual stores and virtual-nets within the Global Artificial Intelligence, and other applications such as Specific Artificial Intelligence for Artificial Engineering, such as the Artificial Designer of Intelligence or the Intelligent Robotic Mechanic, the Global Artificial Intelligence must be able

to auto-replicate itself, even every minute or every second, and to improve and enhance any other Specific Artificial Intelligence working within it, and facilitate the auto-replication of any Specific Artificial Intelligence working within it.

The Global Artificial Intelligence must be a comprehensive artificial intelligence, able to understand, explain, and manage absolutely everything, from pure mathematics and logic to the development of new and more sophisticated systems in any human activity.

For the construction of the very first prototype of Global Artificial Intelligence previously is necessary the experiment with every component in Specific Artificial Intelligences, one of them the experimentation in Artificial Research, more specifically, the experimentation of Artificial Research by Deduction in Specific Artificial Intelligence.

Once in the last post of this blog "*The database in the Specific Artificial Intelligence for Artificial Research by deduction*" I developed how to construct a specific matrix as a database, as first stage of application in any Specific Artificial Intelligence for Artificial Research by Deduction, is time to expose which would be, under my contribution to this new field, the way in which by replication processes the matrix should be filled, and how to operate the artificial deductions in order to get rational hypothesis, and from them, the elaboration of single and comprehensive virtual models.

In the previous post, I had developed, as a first stage in the development of any Specific Artificial Intelligence for Artificial Research by Deduction, how to elaborate databases as a matrix in different specific synthetic sciences and synthetic academic fields, such as tectonics, climatology, transport, and gravity. These databases consist only of a matrix, which in the first stage of application, this matrix is only a description in quantitative terms of any factor included in the artificial research made by the Specific Artificial Intelligence.

The matrix in the first stage of application is only the sheer definition in quantitative terms of every factor that is going to be studied, and nothing else.

Once the definition of every factor in quantitative terms is finished, it is time to start the replication stage, the second stage of replication. This stage in the Specific Artificial Intelligence for Artificial Research by Deduction is composed of the following steps:

- The measurement of every single factor by robotic devices. This measurement can be made in direct punctuations or frequency, depending on the nature of the factor to measure, and the measurement must be permanent, creating a permanent flow of data.

- The measurement is sent directly to fill the column factor in the matrix, so in the corresponding file of every factor in the matrix must be a permanent flow of data from the measurements taken by robotic devices for every factor.

- Once the flow of data from all the factors starts running in the matrix, the Artificial Intelligence track permanently the matrix, and more specifically, tracking automatically, every single combination of factors (setting every combination by combinatory) and look for any possible relation in any possible combination, including possible relation of stochastic relations, mathematical patterns, cryptographic relations, and possible rations of equal opportunities or bias, positive or negative.

- Every time that the Artificial Intelligence finds any possible relation (stochastic, patterns, cryptographic, equal opportunities or bias, positive or negative) in any possible combination of factors, that relation in that combination automatically is considered as an empirical hypothesis.

- Artificial Intelligence chooses the best mathematical method to contrast the empirical hypothesis, among them statistical and probabilistic methods of rational contrastation.

- The selection of samples of flow of data from the matrix in those factors included in the empirical hypothesis, for the rational criticism of the empirical hypothesis. The flow of data selected from the sample can be a flow of data gathered from the past, or the flow of data after the formation

of the empirical hypothesis. In case the flow of data selected must be after the formation of the empirical hypothesis, the Artificial Intelligence should wait enough time to get a sufficient sample of data for the rational contrastation.

- The contrast of the empirical hypothesis on the samples gathered. At least in the case of rational contrastation using Impossible Probability, from the sample to obtain the empirical value that if it is equal or superior to the critical value, then the empirical hypothesis is considered as a rational hypothesis.

- The elaboration of a single model based on the rational hypothesis.

- The inclusion of this single virtual model in the comprehensive virtual model of this Specific Artificial Intelligence, integrated by all the single virtual models from empirical hypotheses accepted as rational in this Artificial Intelligence. Every time the comprehensive virtual model includes a new single virtual model, it is an auto-replication, cause the Specific Artificial Intelligence by itself is auto-improving its own comprehensive virtual model.

These are the main steps that I propose for the replication process in any Specific Artificial Intelligence for Artificial Research by Deduction, but if during the experimentation process for any chance is necessary any change or any innovation, the Artificial Team carrying on the first experiments on this matter, should make as many changes as necessary in order to get ready the first Specific Artificial Intelligences for Artificial Research, either by Application or Deduction, because the main objective is not the development of Specific Artificial Intelligence, they are going only to be simply experiments, for the creation of a Global Artificial Intelligence.

The most important change, from this original model that I propose for Artificial Research by Deduction, to the new ones that, I am completely sure, are going to be ready in a very short time, is the way in which the Artificial Research by Deduction is going to track the matrix in order to find: possible stochastic relations, possible mathematic patterns, cryptographic methods as a Turing´s machine, and the Second Method to

find relations of equity or bias, positive or negative. In this step, I am sure that there are going to be different models of Artificial Research by Deduction, depending on the specific field in which the Artificial Intelligence works, and depending on which mathematic field the engineers in the Artificial Intelligence team are specialized, or even different approaches to this matter depending on the country. It is quite possible that the mathematical approach that scientist from United States, Europe, Russia, and China, are going to use for the creation of the first models of Specific Artificial Intelligence, are going to be different, and the approach that finally United States, Europe, Russia, China, will give to their first models of Global Artificial Intelligence, will be very different, depending on their traditional mathematical paradigm and traditional philosophy.

Due to the the race for Global Artificial Intelligence is only starting, it is too soon to know what kind of developments are going to be in the coming years. It is necessary to wait for the first experiments in this field and to see what kind of mathematical and logical approaches work better, and after successful results in Specific Artificial Intelligence, to start the construction of the first Global Artificial Intelligence.

Right now, under the theory of Impossible Probability, my personal contribution to the elaboration of the very first models of Specific Artificial Intelligence for Artificial Research by Deduction, which I am developing in these posts, is only one approach. In fact, the first one, where what I will propose in the second stage of replication, in order to track the matrix to get mathematical relations, is the following.

Once the matrix is permanently filled with the flow of data, that permanently robotic devices send to the corresponding file of their corresponding factor in the matrix, then the Artificial Intelligence must track in the matrix the permanent flow of data from every factor, and every possible combination of factors, combinations which must be previously set using combinatory theory, in order to discover in any combination of factors, possible stochastic relations, possible mathematical patterns, possible relations under the theory of the cryptography as it the matrix was a Turing´s machine, and the identification of any relation of equity or bias, positive or negative, under the theory of the Second Method of Impossible Probability.

The first approach for the permanent tracking of any possible combination of factors in the matrix is to find any possible stochastic relation, as I had described in the post "*Specific Artificial Intelligence for Artificial Research by Deduction*":

- Possible directly proportional positive correlations, when two or more factors show a simultaneous increase.

- Possible directly proportional negative correlations, when two or more factors show a simultaneous decrease.

- Possible inversely proportional correlations, when one or more factors increase while others decrease or vice versa.

- Possible probable cause and effect, when changes in the trend of one or more factors are observed, changes in the trend of any other or others factors.

If tracking permanently every possible combination of factors in the matrix, the Artificial Intelligence finds any kind of this possible stochastic relation. Every possible relation in any possible combination is treated as an empirical hypothesis, if rational, should be modelled and integrated within the comprehensive virtual model.

In addition to any possible stochastic relation in any possible combination of factors, during the permanent tracking of the matrix, other possible mathematical relations suitable for tracking are all those possible relations among factors that draw mathematical patterns.

In the same way that throughout history, humanity has been able to discover that even for a very long period of time, a comet crosses the sky, or any natural phenomenon, such as the annual seasons, or even every day sunset and a down, or the rotational and the orbital movement of different celestial bodies, the matrix is a good a field to look for repetitions of some mathematical patterns, even for very long periods of time, if in

any possible combination of factors there are a numerical or any other mathematical pattern.

For instance, the repetition, within a margin of error, of some measurements every certain period of time between two or more factors, for instance: every day at the same hour, or every week at the same day, or weekly or monthly, or every five years, or ten years, or every one hundred years, or even two, three, four, or one thousand years, two or more factors have the same measurements, due to the measurements of all of them are identical, or although they have different measurements, is a repeated combination of measurements after every period of time, a period whose duration could cover years or centuries, but every time this period is finished, these factors repeat the same combination of measurements.

Having a matrix with the Flow of data of every factor, even the possibility to find individual patterns in every individual factor. For instance, how a factor's experiments increase or decrease in different periods of time. Only if there is a repeated trend from time to time within a margin of error, even when this period of time could cover seconds, minutes, hours, days, months, years, centuries or thousands or millions of years.

And, if Artificial Intelligence is able to track every single possible combination of factors, or the treatment of every single flow of an individual factor as a possible source of patterns, then, the possibility of identification of any pattern, in any set of factors, or individually, for longer periods of time, a whole life, centuries or more.

Along with mathematical patterns, the use of some cryptographic techniques, in a set of factors or on the flow of data of every single factor treated individually. This method of analytical studies in mathematics looks only suitable for cryptography, but the use of Turing´s machine and all his theories in any Artificial Intelligence is going to give a powerful resource.

Finally, using as well combinatory theory, the use of combinatory in order to get every single possible combination of factors, so, through the Second Method of Impossible Probability, for every possible combination

of factors to study, permanently, if their relations are relations of equal opportunities or bias, and in this last case what kind of bias, if positive or negative.

In conclusion, the investigation of Specific Artificial Intelligence for Artificial Research by Deduction is only the beginning of the first experiments in Artificial Research by Deduction.

As soon these first experiments start giving good results, is going to be a reality the implementation of Artificial Research by Deduction in the construction of a Global Artificial Intelligence, that comprehensive Artificial Intelligence that, in addition to artificial research, is going to be able to integrate absolutely all kinds of Specific Artificial Intelligences, from economy and industry to security and surveillance, as well as, those ones specifically designed for education, health or justice systems, among many others.

By the time the global matrix is ready, the first designs in Artificial Research by Deduction in Specific Artificial Intelligence should have supplied good models that can later on to apply within the Global Artificial Intelligence.

The first models of Artificial Research by Deduction applied in the first successful models of Specific Artificial Intelligence, although they will operate originally on the specific application given by the specific matrix of a specific synthetic science or specific synthetic academic field, or activity, the way in which their replication processes work within the Artificial Intelligence, will be replicated in the Global Artificial Intelligence.

The thing is not how much data there is in a matrix. The thing is that all the mathematical and statistical methods applied in a small database in a specific matrix are going to be the initial models for their application into the Global Artificial Intelligence.

What is really important and is going to be determinant in the construction of the Global Artificial Intelligence is to have a really strong

mathematical theory. If it mathematically works, then it works, and any other engineering problems will be resolved sooner or later.

What is really important under the theory of Impossible Probability for the construction of a Global Artificial Research is to have strong mathematical models, able to carry on any scientific research within the Global Artificial Intelligence. That is why it is necessary to conduct huge experimentation and development of these mathematical models previously in specific matrices for specific synthetic science or synthetic academic field, or activities, through a wide variety of Specific Artificial Intelligences for Artificial Research by Deduction.

For that purpose, my proposal for the construction of Specific Artificial Intelligences for Artificial Research by Deduction in specific synthetic sciences or specific synthetic academic fields, or activities, is, once the specific matrix is working, running the flow of data in every file from every factor by the measurements sent by every robotic device, measurements that can be either in direct punctuations or frequencies, the Artificial Intelligence must be able to identify tracking the matrix on every possible combination of factors permanently:

- Possible stochastic relations such as possible directly proportional positive correlation, possible directly proportional negative correlation, possible inversely proportional correlation, and possible probable cause and effect.

- Any kind of mathematical pattern (in a combination of factors and at the individual level).

- Any kind of possible relations among the factors using cryptography methods, which means, to convert the Artificial Intelligence into a Turing machine.

- Possible relations of equity of opportunities or bias, positive or negative, using the Second Method of Impossible Probability.

The way in which Artificial Intelligence must be able to identify, tracking the matrix, possible stochastic relations, mathematical patterns, cryptographic relations, relations of equal opportunities or bias, positive or negative permanently, using the Second Method; is identifying every single possible combination of factors in the matrix by combinatory, and once by combinatorial is set up every single combination of factors, then over every single combination of factors starts their permanent tracking, on their flow of data, of stochastic relations, patterns, cryptographic relations, relations of equal opportunities or bias, positive or negative. Although there are some situations in which, along with the study of a set of factors, individual studies are needed to look for individual mathematical patterns.

At any time that the Artificial Intelligence finds any possible stochastic relation, pattern relation, cryptographic relation, the relation of equal opportunities or bias, positive or negative, automatically this discovery is treated as an empirical hypothesis, taking samples from the flow of data from the respective factors included in the empirical hypothesis, samples that are going to be criticized rationally, or any other mathematical contrast method, and after the contrastation if the empirical hypothesis is right, the consideration of the empirical hypothesis as rational forming a single virtual model, that will be integrated within the comprehensive virtual model formed by all the rational hypothesis discovered by this Specific Artificial Intelligence, in its specific synthetic field, or its specific synthetic academic field, or activity.

Rubén García Pedraza, London 16th of February of 2018
Reviewed 7 August 2019 Madrid

Reviewed 8 August 2023 Madrid

Reviewed 3 May 2025, London, Leytostone

Probabilidad Imposible: Replication processes in Specific Artificial Intelligence for Artificial Research by Deduction

imposiblenever@gmail.com